

Some Facts and Theories About Flu Reading Passage

Some Facts and Theories About Flu

- A. The flu, or influenza, gets its name from the ease with which it spreads from person to person (influenza is the Italian word for 'influence'). Typically, contamination occurs through direct contact with an infected person's secretions. It can also spread through contaminated airborne particles, such as those produced when someone coughs or sneezes. However, it should be noted that simply being in the same room as an infected person poses a minor risk because the flu virus, unlike other respiratory viruses, does not dissolve in the air. The virus multiplies in infected cells within 4-6 hours of infection, and the cells burst, spreading the virus to other cells nearby.

- B. The spread can last up to 72 hours, depending on the body's immune system response and the strength of the specific strain of flu. For many years, scientists have been interested in the variety of human responses to the flu virus. This is due to the fact that the effect can range from no infection to a rapid and lethal spread of the virus to a large number of people. Individual immune system response is one area of study that has received particular attention. When a person's immune system is strong, the virus is attacked as soon as it enters the body, which is usually through the respiratory tract. The severity of the illness is reduced as a result. People with compromised immune systems, on the other hand, often suffer the worst consequences (typical in the young, where it is not fully developed, or in the elderly and sick, where it is not working efficiently).

- C. One of the body's reactions to the flu is the production of antibodies that recognize and destroy the specific strain of the flu virus. What most flu researchers find fascinating is that the human body appears capable of storing these antibodies for a lifetime in case of a future attack from the same or similar strains of flu. Scientists returned their attention to what was possibly the world's worst flu pandemic while researching these antibodies. The exact number of deaths is debatable, but the 1918 outbreak killed between 20 and 50 million people. It is also estimated that one-fifth of the world's population has been infected.

- D. Tests on some of the 1918 flu survivors revealed that, 90 years later, they still possessed the antibodies to that strain of flu, and that some of them were even producing the

antibodies. Work is now being done to determine why these people survived in the first place, with one theory being that they had previously been exposed to a similar strain, developing immunity to the 1918 strain. It is hoped that we will be able to isolate the antibodies and use them to vaccinate people against future outbreaks in the near future.

- E. However, flu vaccination is an imprecise measure. At best, the vaccine protects us from the flu strains that doctors anticipate that year. If their predictions are incorrect in any given year, vaccination will not protect us from infection. This is complicated further by the fact that there are two types of flu: influenza A and influenza B. Influenza B is less concerning because its effects are usually less severe. Influenza A, on the other hand, has the ability to change its genetic makeup. Although these genetic changes are uncommon, they result in the emergence of entirely new strains of flu against which we have no immunity. It has been proposed that this is what occurred immediately prior to the 1918 outbreak, with research indicating a genetic shift in China.
- F. Another genetic shift in influenza A virus was discovered in 2005, giving rise to the H5N1 strain, also known as avian flu or bird flu. We have no way of fighting it, as is typical of such new strains, and many people who become infected with it die. Perhaps more concerning is that it is a strain previously only found in birds, but which has changed its genetic makeup in such a way that it can be transmitted to humans. The majority of the concern about this virus is that it will evolve again, gaining the ability to spread from human to human. If that change occurs, scientists and doctors can reasonably expect a death rate comparable to that of 1918, and given that we can now travel between countries more quickly and easily, infecting many more people than was previously possible, it could be several times worse.

Questions

Questions 1-4

Write the correct letter, A, B or C.

Classify the following statements as characterizing.

- A. something that is known by scientists to be true
- B. something that is believed by scientists to be true
- C. something that is known by scientists to be false.

1. The H5N1 strain appeared in or around 2005.
2. Influenza A Viruses do not frequently change their genetic make-up.
3. In 1918, the flu infected one-fifth of the world's population.
4. Sharing a room with someone who has the flu puts your health at risk.

Questions 5 & 6

Answer the questions below. Write NO MORE THAN THREE WORDS for each answer.

5. What kind of H5N1 strain transmission are people afraid of becoming a reality?
6. Normally, antibodies attack the flu virus in which part of the body?

Questions 7-13

Do the following statements agree with the information given in the Reading Passage?

In boxes 7-13 on your answer sheet, write

TRUE if the statement is true

FALSE if the statement is false

NOT GIVEN if the information is not given in the passage.

7. Another change in the H5N1 strain's genetic make-up could kill more people than the 1918 pandemic.
8. Vaccination against flu is largely ineffective.
9. Although antibodies last a lifetime, scientists have discovered that they deteriorate with age.

10. People who are very young or very old are more likely to suffer from the flu.
11. The severity of a flu infection is determined by the strain.
12. Within 4-6 hours of infection, you become aware of flu symptoms.
13. You can only get the flu if someone coughs or sneezes near you.